

## CLAIMS:

1. A device for determining a value that is representative of accelerations in at least two directions perpendicular to each other, the device comprising a sensor system with which the acceleration in each of the mutually perpendicular directions can be converted into an electric signal while the value can be determined from the electric signals by signal  
5 processing means, characterized in that prior to the signal processing means the electric signals can be added together by means of an adding element.
2. A device as claimed in claim 1, characterized in that in the adding element the connections conducting the electric signals are arranged in parallel.  
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3. A device as claimed in claim 1 or 2, characterized in that a sensor system comprises at least a sensor which comprises a flexible strip made of piezoelectric material.
4. A device as claimed in any one of the preceding claims 1-3, characterized in  
15 that the signal processing means comprise a signal amplifier, a bandpass filter and a processor.
5. An ergometer for measuring a value that is representative of a physical effort of an individual, the ergometer comprising a device that includes a sensor system with which  
20 the acceleration in each of the directions extending perpendicularly to each other can be converted into electric signals, while the value can be determined from the electric signals by signal processing means, characterized in that prior to the signal processing means the electric signals can be added together by means of an adding element.
- 25 6. An ergometer as claimed in claim 5, characterized in that in the adding element the connections conducting the electric signals are arranged in parallel.

7. Ergometer as claimed in claim 5 or 6, characterized in that the ergometer comprises a database in which the value is correlated to an energy value such as, for example a nutritional value.
- 5 8. Ergometer as claimed in claim 7, characterized in that the ergometer comprises a memory in which energy values can be stored over a certain period of time.
9. Ergometer as claimed in claim 7 or 8, characterized in that the ergometer comprises a screen on which the instantaneous effort and/or average effort can be displayed  
10 in energy values over a certain period.
10. An ergometer as claimed in any one of the preceding claims 5-8, characterized in that the ergometer comprises a coupling to which a computer can be connected, for transferring stored data from the ergometer to the computer.
- 15 11. An ergometer as claimed in any one of the preceding claims 5-10, characterized in that the sensor system comprises at least a sensor that includes a flexible strip made of piezoelectric material.
- 20 12. An ergometer as claimed in one of the preceding claims 5-11, characterized in that the signal processing means comprise a signal amplifier, a bandpass filter and a processor.